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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,315	06/29/2004	Johannes W.G.M. Huijbers	84405	7084

7590 09/19/2006

Malcolm D Reid
Gray Plant Mooty Mooty & Bennett
PO Box 2906
Minneapolis, MN 55402-0906

EXAMINER

TALBOT, MICHAEL

ART UNIT	PAPER NUMBER
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3722

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/502,315	Applicant(s) HUIJBERS ET AL.	
	Examiner Michael W. Talbot	Art Unit 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 10-14, 33 and 36-40 is/are rejected.
- 7) ☒ Claim(s) 5, 8, 9, 15-32, 34 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

(a) It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56.

(b) It does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month and year of its filing.

Claim Objections

2. Claims 15-17,23,28-32,34 and 35 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and/or can not depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

3. Claim 1-40 are objected to because of the following informalities:

Claims 2,12,33 and 37 should more clearly state that the cartridge shell surrounds the cartridge body. As written, the punctuation and itemized lettering within these claims render them awkwardly worded.

4. Claims 1-40 are replete with terms lacking proper antecedent basis. The claims should be reviewed carefully to provide proper antecedence for all recited claim limitation. Examples of some terms lacking proper antecedent basis used in the claims are:

Claim 1 recites the limitation "the inner bore" in line 5. There is insufficient antecedent basis for this limitation in the claim.

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Claim 6 recites the limitation "the inner bore" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the inner bore" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the first access port" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the hydraulic circuit" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the seal oil/air escape through hole" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 36 recites the limitation "the toolholder nosepiece" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 40 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 40 recites "The hydraulic cartridge of claim 1" from which it depends from, however, claim 1 is not drawn to a "hydraulic cartridge" but is drawn to "A hydraulic holder comprising". Therefore, at this time, patentability has not been determined for claim 40 as its dependency is unclear.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1,6,7 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Massa '048.

With regards to claims 1,6 and 7, Massa '048 shows in Figures 1-1B and 3A-3D a hydraulic holder comprising a shank (16) for mating engagement with a rotating machining device (col. 2, lines 56-58), a nose piece (14) having an axial bore (18) and being in axial alignment with the shank and a hydraulic cartridge (22) fixedly mounted in the bore (col. 3, lines 3-14) so as to be actuated to clamp a tool or workpiece in an inner bore of the cartridge.

With regards to claims 11-13, Massa '048 further shows in Figure 4 a mandrel cartridge comprising a deformable outer cartridge shell (22') surrounding a mandrel cartridge body (12') and having a hydraulic circuit (30') filled with hydraulic fluid (32') and a means of displacing the hydraulic fluid (via ports 34 shown in Fig. 1) so that upon compression of the hydraulic fluid within the hydraulic circuit the deformable outer cartridge shell deforms outwardly for mating engagement with a bore in a tool or workpiece. Massa '048 further shows a shank (16 shown in Fig. 1) for mating engagement with a rotating machining device.

10. Claims 1,6,7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 91/17853.

With regards to claims 1,6 and 7, WO 91/17853 shows in Figures 1 and 2 a hydraulic holder comprising a shank (1) for mating engagement with a rotating machining device, a nose piece (part of 1 located to the left of the flange as viewed in Fig. 1) having an axial bore (2) and

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being in axial alignment with the shank and a hydraulic cartridge (3) fixedly mounted in the bore so as to be actuated to clamp a tool or work piece in an inner bore of the cartridge.

With regards to claim 10, WO 91/17853 shows a tool holder having a hydraulic circuit (5,7) in a tool holder bore wall, a deformable cartridge shell (8) affixed fluid tight around the tool holder bore and hydraulic fluid (in the hydraulic circuit with means for compressing (12,11) the hydraulic fluid in the hydraulic circuit to deform the inner cartridge shell inwardly to matingly engage a tool or work piece located within the inner bore of the inner cartridge shell.

11. Claims 2,4 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Kampmeier '408. Kampmeier '408 shows in Figures 1-4 a hydraulic cartridge comprising a cartridge shell (13) surrounding a cartridge body (20), the cartridge body having a hydraulic circuit (39,45,36,37,37a,22) filled with hydraulic fluid, a means of compressing (via pistons 40,44) the hydraulic fluid within the hydraulic circuit and a deformable inner wall (23) surrounding an inner bore so that upon compression of the hydraulic fluid within the hydraulic circuit the inner wall deforms into the inner bore for mating engagement with a tool or work piece within the inner bore. Kampmeier '408 shows an actuator access port (aperture between chamber 45 and duct 36) in the cartridge shell and a piston (44) in a piston cylinder is in radial alignment with the actuator access port whereby longitudinal movement of the piston into the piston cylinder compresses the hydraulic fluid within the cartridge.

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 36-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Rinne et al. '987. Rinne et al. '987 shows in Figures 2-8 a hydraulic tool holder comprising a hydraulic

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circuit (5) in the outside wall of a nosepiece, a deformable outer cartridge shell (6) affixed fluid tight around the hydraulic circuit, a hydraulic fluid in the hydraulic circuit, the hydraulic circuit having a piston (4) in a longitudinal piston cylinder extending from the nosepiece to the hydraulic circuit, an actuator (4a,4b) for movement of the piston and a seal (4c) moveable by the piston through a seal displacement range and proximate to the hydraulic circuit whereby longitudinal movement of the piston into the piston cylinder compresses the hydraulic fluid within the hydraulic circuit to outwardly deform the cartridge shell for reliable engagement with a bore in a tool or work piece located around the cartridge shell. Rinne et al. '987 shows a shank portion (1) and a cylindrical end (left side of flange as viewed in Fig. 2) affixed to the shank portion in axial alignment.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmeisl '325 in view of Laube '042. Schmeisl '325 shows in Figures 1-2 a hydraulic holder comprising a shank portion (34) for mating engagement with a rotating machining device (14), a nosepiece (12) in axial alignment with the shank portion having an axial bore, a cartridge (16,17) inserted in the axial bore having a body (16) and a shell (17) surrounding the body, and a second actuator access port (52) in the shell. Schmeisl '325 lacks the nosepiece having a first actuator access port in radial alignment with the second actuator access port of the shell.

Laube '042 shows in Figures 1-2 a hydraulic holder comprising a cartridge body (50) having at least one deformable inner wall portion (52) and the cartridge body having a hydraulic

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circuit (80) filled with hydraulic fluid via a first actuator access port (84). In view of this teaching of Laube '042, it would have been obvious to modify the holder of Schmeisl '325 to include a first actuator access port in the nosepiece being in radial alignment with the second actuator access port of the shell to provide for direct fluid delivery means from an outside source to that of the clamping region.

15. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laube '042 in view of Danielsen '895. Laube '042 shows in Figures 1-2 a hydraulic holder comprising a shank portion (22), a cylindrical end (30) affixed to the shank portion (at 24 and 32 via screws 40) in axial alignment with the shank portion, a cartridge body (50) having at least one deformable inner wall portion (52) defining a cylindrical end bore in mating engagement with the cylindrical end, and the cartridge body having a hydraulic circuit (80) filled with hydraulic fluid and a means of compressing (84) of the hydraulic fluid within the hydraulic circuit so the inner wall deforms inwardly for releasable fixed mating engagement with the cylindrical end. Laube '042 lacks a deformable outer cartridge shell such that compression of the hydraulic fluid within the hydraulic circuit deforms the outer cartridge shell outwardly for releasable fixed engagement with a bore in a tool or work piece.

Danielsen '895 shows in Figures 1 and 2 a mandrel cartridge (2) having a hydraulic circuit (4) and both an inner and outer deformable wall section (Fig. 2) such that compression of the hydraulic fluid within the hydraulic circuit deforms the outer cartridge shell outwardly for releasable fixed engagement with a bore in a tool or work piece. In view of this teaching of Danielsen '895, it would have been obvious to modify the holder of Laube '243 to include an outer deformable wall for clamping/adjusting that is hydraulically linked to the tool clamping means to increase the functionality of the tool holder by providing a quick, easy and more secure means to clamp the tool holder into place on a machine in lieu of mechanical screws.

Allowable Subject Matter

16. Claims 18-22 and 24-27 would be allowable if rewritten to overcome the “replete” objection(s) set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 18-22 and 24-27 are allowed.

Claims 18 and 19 are the independent claims.

17. Regarding claim 18, the prior art of record fails to anticipate or make obvious, solely or in combination, the specific method steps of retrofitting a hydraulic tool holder having an integral hydraulic circuit with a piston cylinder, seal piston and actuator comprising the steps of (a) drilling a piston cylinder along a transverse axis of the nosepiece so that the piston cylinder intersect with the hydraulic circuit; (b) filling the hydraulic circuit with hydraulic fluid; (c) inserting a seal into the piston cylinder to the desired depth, whereby some of the hydraulic fluid escapes out of the seal oil/air escape through hole; (d) inserting a piston into the piston cylinder so that the piston pin mates with the oil/air escape through hole in the seal; and (e) inserting an actuator into the piston cylinder.

Rinne et al. '987 is the closest art of record.

Rinne et al. '987 is as described above. Rinne et al. '987 lacks (1) specific reference to the method steps and their sequence and (2) a seal having an oil/air escape through-hole “whereby some of the hydraulic fluid escapes out of the oil/air escape through-hole” prior to “a piston pin of the piston being inserted into the oil/air escape through-hole” as set forth in independent claim 18. Although it is well known to use a seal member when a piston actuation member of a hydraulic circuit is present, there is no teaching in the prior art of record that would, reasonably and absent impermissible hindsight, motivate one having ordinary skill in the art to so modify the teachings of Rinne et al. '987, noting that in Rinne et al. '987, the specific method

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steps and sequence are not disclose nor does the seal member have oil/air escape hole for receipt of a piston pin. Thus, for at least the foregoing reasons, the prior art of record neither anticipates nor rendered obvious the present invention as set forth in independent claim 18.

18. Regarding claim 19, the prior art of record fails to anticipate or make obvious (1) a piston cylinder extending into a first annular positioning ring, (2) at least one fill/bleed channel disposed longitudinally in the first annular positioning ring and the at least one fill/bleed channel being in communication with the piston cylinder and with a clamping band, (3) the clamping band surrounding at least a portion of that portion of the inner wall of the cartridge body that is deformable and surrounding a portion of the cartridge shell, and (4) the actuator, piston and seal in axial alignment with one another in the piston cylinder with the seal proximate to the at least one fill/bleed channel, solely or in combination with, a deformable cartridge shell having an actuator access port, the deformable cartridge shell surrounding a cartridge body having a piston cylinder with an actuator access port, a first annular positioning ring and an actuator and a seal.

Schmeisl '325 is the closest art of record.

Schmeisl '325 is as described above. Schmeisl '325 lacks the key elements of (1) a piston cylinder extending into a first annular positioning ring, (2) at least one fill/bleed channel disposed longitudinally in the first annular positioning ring and the at least one fill/bleed channel being in communication with the piston cylinder and with a clamping band, (3) the clamping band surrounding at least a portion of that portion of the inner wall of the cartridge body that is deformable and surrounding a portion of the cartridge shell, and (4) the actuator, piston and seal in axial alignment with one another in the piston cylinder with the seal proximate to the at least one fill/bleed channel as set forth in independent claim 19. Although it is well known to have these elements present, there is no teaching in the prior art of record that would, reasonably

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and absent impermissible hindsight, motivate one having ordinary skill in the art to so modify the teachings of Schmeisl '325, noting that in Schmeisl '325, these key elements are lacking in presence and function. Thus, for at least the foregoing reasons, the prior art of record neither anticipates nor rendered obvious the present invention as set forth in independent claim 19.

Conclusion

19. Any inquiry concerning the content of this communication from the examiner should be directed to Michael W. Talbot, whose telephone number is 571-272-4481. The examiner's office hours are typically 8:30am until 5:00pm, Monday through Friday. The examiner's supervisor, Mrs. Monica S. Carter, may be reached at 571-272-4475.

In order to reduce pendency and avoid potential delays, group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at FAX number 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers, which require a fee, by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Michael W. Talbot of Art Unit 3722 at the top of your cover sheet.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


MWT
Examiner
6 September 2006


MONICA CARTER
SUPERVISORY PATENT EXAMINER